

CASBOARD 2068

The Flexi-Board System

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by
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First of all, thank you for your patronage. I hope, and believe, that you will find CASBOARD 2068 an exceptional value. Please take the time to read this documentation through, as there are many features and options you will not be able to take advantage of unless you do. If you have any questions not answered in this documentation, or experience any problems, please feel free to contact me.

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*The Pitch

CASBOARD 2068 is a full featured BBS program allowing for uploading, downloading, and multiple message bases. File transfers may be made using ASCII, HEX, or XMODEM protocol. It runs using 8 bit word size, No parity, and 1 stop bit. Virtually every aspect of the program has been designed for easy modification and alteration by you, the sysop. A good BBS should have a personality of its own. With the flexibility of CASBOARD 2068 the only limitation to the personality of your BBS will be your own imagination!

There may be, in the future, revisions of this program depending on you, the customer. If you find some feature lacking, or want specific modifications made, let me know. I will try to help, and if what you want is desired by many, I will release a new version for any who want it. Your cost for any such revisions will be my cost. I have no intention of making anyone buy the same program more than once! If you wish to be notified of any such revisions, send your name and address to me at the above address.

*Three Versions

There are three versions of the BASIC portion of CASBOARD 2068 on the side of the cassette marked: 'BBS'. They are titled: "TAPE", "A&J", and "DISK". Use the one that fits your mass storage system. There is only one version of the machine code portion of the program, and it is on the side of the cassette marked: 'CODE'. The tape version lacks the upload, download, and multiple message base capabilities, since they are impractical with a tape storage system. The disk version was written on and for a Zebra FDD disk system. It should, however, be easy to modify for ANY mass storage system that uses no RAM above 26710 (the start of BASIC), and is able to load and save 'Bytes:' files.

*Setting Up

You will need a minimum of three cassette sides, wafers, or disk sides for your working system. One for your backup, one for the working BBS program, and one for your message base(s) and other files. You may also wish to backup the message base(s), and will need additional media for that. If you are using a dual (or more) drive system, additional media will, obviously, be needed for that also. The BBS program (BASIC and machine code) use about 8k, and the message bases (for disk or wafer) use just under 28k (28,650 bytes each), so select your wafer accordingly! You can alter the size of the message bases if you wish, making them smaller or (slightly) larger. This size was chosen so that 3 bases would fit on one 50 foot wafer, or 5 bases on one disk. The tape version message base is larger, but its size may also be easily changed if you wish.

After formatting your disks, wafers, or whatever, follow these steps to set up your BBS. (You should read the remainder of the documentation BEFORE you set up!)

1) Load the BASIC version of your choice. Each version is saved (and verified) twice on the cassette. First "TAPE", then "A&J", and lastly "DISK". Once loaded, the BASIC will auto-start in order to load the machine code. Since the machine code is on the other side of the tape, you will have to turn the tape over at this point. When both the BASIC and the machine code have been loaded, the program will stop with the report: 9 STOP statement, 9998:1.

2) Make whatever modifications, alterations, and customizations you wish. (I told you that you should read the remainder of the docs first!) I suggest you start out with only a few modification, and build from there!

3) Make a backup copy of your customized BBS by typing: SAVE "backup": SAVE "bucode" CODE 63360,2176. When you want to make further modifications, without starting from scratch, you will need this backup, as the working BBS program DELETES some of the lines (lines only needed to set up variables etc., excess baggage once running!) when it is loaded.

4) Make your working copy of the BBS by typing: RUN 9999.

*The Sysop's Menu

When you load the working BBS it will auto-run, loading in the machine code, initializing lots of variables, and leaving you at the Sysop's menu. It is from here that you will control the day to day operation of the BBS. Each function you may perform is listed on this menu, with the appropriate keypress highlighted in inverse video. You may enter these commands in upper or lower case, either will be accepted. If you ever want to 'break' the program, just hit cap-shift 6 at the Sysop's Menu. GOTO 2 to re-start!

<T>oday's Date: To set the date you press 'T' and you will be prompted for the date. You may enter the date any way you wish, (for example, 09/31/86) you do not have to enter it spelled out as I did.

<U>/L=? This is the toggle switch for whether or not user's uploads are allowed. Pressing 'U' will toggle from Y to N, or back. See the notes titled: 'About Uploads'.

<D>/L=? This is the toggle for whether or not downloads are permitted. See the notes titled: 'About Downloads'.

<!)Password= Pressing '!' prompts you for the new password.

<*> Pressing '*' allows you to create a new message base.

<O>ptions: Pressing 'O' allows you to alter the options for the current message base. The options you may choose from are:

R/W Message base can be written to and read from by the users.

R/O Message base can be read from, but not written to by the users.

W/O Message base can be written to, but not read from by the users.

Scroll? Y or N controls whether or not the oldest messages scroll off as new messages are added to the message base. If scroll is set to N, then if the message base fills all the way up, no new messages can be added by the users.

Please note that these settings affect only what the users of your BBS can do, not what you, as sysop, can do.

<L>oad Message Base presents menu of message bases for your choice, and loads the one you select.

<S>ave Message Base saves the current message base, overwriting any old message base with the same name.

<P>rint Message Base prompts for bulletin or messages, then prints which ever you select on the printer. All of the messages are printed out if you select messages.

<V>iew Message Base prompts for bulletin or message, then prints which ever you select on the screen. If you allow long messages, or if you select scroll, they will scroll rather quickly by! Pressing either 'Caps Shift' key will pause the scrolling as long as you hold it down. After each message, you will be prompted for 'Scroll, Next, or Quit'. You actually have 5 options here, pressing:

S will scroll the messages by, not stopping between each message.

N (or just ENTER) will continue with the next message.

Q will quit to the Sysop's Menu.

D will delete the message you just read.

P will print the message you just read on the printer.

<E>nter Message Base Bulletin allows you to enter the bulletin for that message base. Let your text (and words) wrap around, pressing ENTER only at the end of each paragraph. It may look funny when you type it, but it will be properly formatted when you, or one of your users, read it. Not only does this approach save memory, but it allows the text to be properly formatted for your user's screen, whatever width it is. Press 'STOP' (symbol shift A) when you are finished typing the bulletin.

<W>rite a Message prompts you for 'To:', and 'Re:', then lets you type in your message. Please follow the same typing rules outlined above. Press 'STOP' (symbol shift A) when you are finished typing your message.

<F>orce Chat Mode when you interrupt one of your users on line, you have two options, put them in chat mode, or hang up on them. Pressing 'F' will force the user into chat mode. Press STOP to end chat mode.

<H>ang up hangs up the phone, and activates the BBS. If a user is on line, this will hang up on him/her. To get back to the Sysop's Menu, press STOP.

***Using the BBS**

The normal daily routine for 'firing up the BBS' has been made very easy. (At least that was my intent!) It consists of only four steps:

- 1) Load the working BBS.
- 2) Set the date.
- 3) Load in a message base.
- 4) Hang up to activate the BBS. Press STOP to get back to the Sysop's Menu at any time. Even when a user is on line, pressing STOP will bring you to the Sysop's Menu. If you interrupt a user in the middle of something, (upload, download, entering a message etc.) their work will be lost. So be careful when you interrupt someone!

***The First Time**

The first time you use the BBS things are a little more complicated, but hopefully, not too much more complicated! You should still set the date first, as it is automatically appended to any messages you write to the message base, and you must write at least one message in each base. You must then create your message base(s), as you have none to load! Follow these steps:

- 1) Load the working BBS.
- 2) Set the date.
- 3) Press the asterick (*) key to create a message base.
- 4) Select title of the one you wish to create from the menu presented.
- 5) Answer the prompts about the message base options (Read/Write, Read/Only, or Write/Only, and Scroll Y/N) setting them to your wishes.
- *6) **IMPORTANT:** You will now be back at the Sysop's Menu. You must finish the creation process by writing at least one message to the base (see 'Message entry' in 'Sysop's Menu'). Do this BEFORE doing anything else. Many of the routines expect to find at least one message in the base, so this is mandatory! Please also note that you should never delete all of the messages in a base. Always leave at least one! If you want to erase an entire message base, just re-create it!
- 7) Make any other additions you wish (more messages, your message base bulletin, etc.) then save the message base by pressing 's' at the Sysop's Menu.
- 8) Hang up to activate the BBS. Note that the BBS will not answer the telephone when you are at the Sysop's Menu. Pressing STOP will always return you to the Sysop's Menu.

***Customization**

Before we get too heavily into this area, let me make this perfectly clear: you do not need to modify, or alter anything if you don't want to! The BBS will run just fine the way it was delivered. This section is for those who want to make their BBS unique, or give it a 'personality'.

You do not need extensive knowledge of BASIC to customize the program, only enough to recognize DATA statements, and string assignments. You should, however, keep the screen width in mind when you make the modifications. I suggest that you format your changes for your screen (no more than 31 characters). I also suggest that you run the BBS a while with only minimum alteration. You will have a better idea after that of what you want to change!

Print a listing of the BASIC, or list it on your screen, and we'll take a backwards walk through it, stopping to explain what the lines do, make whatever changes you want in the program as we go!.

9999 Saves the program and machine code for your working BBS.

9000--9005 Contains the variable assignments for most of the prompts, as well as other variables. Some examples of what you might want to change:

- p\$ holds the system password
- y\$ holds the sysop's name or 'handle' (Your name or handle!)
- d\$ holds the date (Change it from the Sysop's Menu!)
- o\$ holds the default settings for the options
- x\$ holds the list of 'acceptable' answers to the Main Menu's prompt
- c\$ holds the list of 'acceptable' answers to the Sysop's Menu prompt
- r\$ holds a carriage return
- t\$ holds two carriage returns
- n\$ will hold the name of the BBS's user
- b\$ will hold the title of the current message base
- a\$, e\$, f\$, g\$, k\$, l\$, m\$, q\$, v\$, and w\$ hold various prompts
- bs holds the starting address of the message base

You may change the size of the message base by changing the variable 'bs', but you must also change the 'CLEAR' statement in line 9000 accordingly.

1000-4000 There are four sets of DATA statements (3 in the tape version) starting at line 1000, 2000, 3000, and 4000. These are, in order, the 'Welcome' message or screen, the Main Menu for the BBS, the Message Base Menu, and the Download Menu. Each of these sets has the same 'format', which you must abide by. The first item of data is the number of data items which follow that should be sent as a line of text. This is followed by that number of data items plus one. The one extra is treated as a prompt. In other words, that last data item is sent, then the program waits for an answer. These DATA statements do not have to be on separate lines, I put them that way in an attempt to make this 'format' more clear, but you may change that if you wish.

For example, the set of DATA statements starting at line 1000 sends out the four data items, then uses q\$ (Password=) as a prompt, waiting for an answer. Note also that by using r\$, or t\$, or both, one DATA item may be more than one line on the screen. To alter this, just enter your data items, count them up, and place the number of them in the first data item. While this may sound difficult, it is not!

198-250 (235 for TAPE) contains the code for running the BBS while on line. Take a look through it, you will see several more prompts that are sent under certain circumstances. Line 250 (235 for TAPE) contains the signoff message.

225 (220 for TAPE) contains the 'beep' loop for when someone wants to chat with you. Pressing any key when someone pages you will put you in chat mode.

76-197 Contain various subroutines. Look through them, as some of them contain prompts.

2-75 Contains the code for running the BBS from the Sysop's Menu.

The LOAD and SAVE statements (if you need to change them for your mass storage system) are in lines: 9999, 9000, 238, 233, 175, and 166.

When you add more message bases to the list in line 3000+, you will also have to edit line 221, changing the 'Highest' from 'B' (or '2' for A&J) to whatever your new highest message base is.

The printer output is set for the TS2040 printer. If you want to use a full size printer, you must have printer driver software that reconfigures the printer channel. This software must also 'live' somewhere under address 26710. Many printer drivers are available that live in the printer buffer. These should work just fine. I have been using John Olinger's printer driver software with my Aerco Centronics interface, but other interfaces and software are available from various dealers. You can alter the length of the line printed out (from 32) to whatever you wish by changing lines 45 and 68. Edit the line where it says POKE rn-i, CODE " ", and change the " " to "R" for 80 characters per line, or use the character (instead of R) that has the code equal to the characters per line you desire. In line 68, POKE rn-i, CODE " " occurs twice. Change only the first one! If your printer requires linefeeds as well as a carriage return, POKE addresses 64257 and 64274 with 10.

The maximum size for a message is 256 times the number in address 63546. (This does not include the DATE, TO, FROM, etc) The current maximum size is set to 512 bytes. If you PRINT PEEK 63546, you should see a 2, but you may alter this as you see fit. Please note that this only defines the maximum size a message can be, not how much space each message takes. Messages are stored so that they take only their actual length in memory.

I realize that we have covered a lot of ground here, in a rather brief section of the documentations. I believe, however, that if you 'play' with it a little, you will find these notes sufficient and the BBS fairly easy to alter. Like programs, most documentations are not perfect. If I have left some gap unfilled, let me know and I'll do my best to fill it in for you. If it becomes obvious that I left something out of these instructions, I will mail any updates I make to any of you who's name and address I have. I want you to have fun with your BBS, not spend your life trying to get it to work the way you want! After all, didn't you buy it for fun?

***About Downloads**

To allow downloads from your BBS, you must do three things:

- 1) Set the D/L toggle to Y.
- 2) Put the name of the file in the download list. (DATA statements starting at 4000) Then check line 221 to see that the range of 'acceptable' answers is correctly set.
- 3) Save the file on the disk or wafer with your message base(s). Name it "D?" where the question mark is replaced with the letter (DISK) or number (A&J) that is referenced on the menu line in the DATA statements.

All files for downloading must be 'Bytes:' files. If you want to make a BASIC program into download file, load the program, then type:

```
LET x=PEEK 23627 + 256 * PEEK 23628: SAVE "D?" CODE 26710,x-26710 then press ENTER.
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Please note that a download file cannot be larger than the message base in size. You should also put a description of the file in a message, or a message base bulletin. Your user can choose which method to use for download, (only text can be sent using ASCII).

*About Uploads

Allowing uploads is the most dangerous thing you can do as a sysop. I would suggest that you only allow uploads at certain times, when you are available to keep an eye on the system. The reason for this caution is that if someone uploads a file, and there is not enough space on your disk/wafer, the whole show will come to a stop. It has also been my observation that most files uploaded without prior approval tend to be junk! It is all up to you, but bear in mind my cautions.

To allow uploads to your BBS you must do two things:

- 1) Set the U/L toggle to Y.
- 2) Have sufficient room on your disk/wafer to accept files.

If you are running with A&J, you will also have to set the variable u equal to the number of files already on your wafer. If, for example, you have message bases 1 and 2, and two files on the wafer for downloading (a total of four files), you would LET u=4. You can make this change in line 9000, if you will be running all the time with the same number of files, or change it on the fly by pressing shift 6 at the Sysop's Menu to stop the program, then typing LET u=4 and hitting ENTER, then GOTO 2.

Any files uploaded will be saved to your disk/wafer as "U?", where the ? is the number of uploads since you fired up. (Plus the number of files already on the wafer for A&J). I know all this sound complicated, but once you 'play' with it a little, you will find it very easy. Also note that the count starts over everytime you fire up.

Now that you've got the upload on your disk/wafer, what do you do with it? First look at it to see if it is something you want at all. Then do what you want with it, rename it as a download for others to share, erase it if its junk, resave it to a different disk or wafer if it is not something you want on the BBS, or whatever! I would suggest that you ask anyone uploading to leave a message describing what they uploaded, so you will know where to start! If it is a text file, or machine code, then it is already in the correct format, 'Bytes:'. If it is a BASIC program, then it will have to be re-converted from a 'Bytes:' file to a 'Program:' file. Please note, however, that if you want to leave it on the BBS as a download it is in the right format!

To re-convert a BASIC program so that YOU can look at it and use it, (or to find the length of any uploaded file) follow these steps:

- 1) From the Sysop's Menu, press shift 6 to stop the program.
- 2) Type: CLEAR 63350: RANDOMISE USR 63726 then press ENTER.
- 3) Load the file into memory (LOAD "U?",CODE)
- 4) Type: RANDOMISE USR 65466 then press ENTER

You will now be looking at the listing of the uploaded program. (The length of the file will be recorded for you in lo/hi byte format at address 63530, and 63531, so PRINT PEEK 63530 + 256 * PEEK 63531 will tell you the length of the file.) You may save it, run it, or whatever you want to do with it. If you have several uploads to convert, then save it but don't run it now, as you may repeat steps 2 to 4 to convert your other uploads.

I realize that this may sound difficult, but once you've tried it a few times you will find that it goes very quickly for you.